REMARKS

I. Introduction

In response to the pending Office Action, Applicants have amended claims 1 and 5 by incorporating the limitations of claim 2. Claim 2 has been cancelled, without prejudice. No new matter has been added.

For the reasons set forth below, Applicants respectfully submit that all pending claims as currently amended are patentable over the cited prior art.

II. The Rejection of Claims 1-3, 5 And 6 Under 35 U.S.C. 103

Claims 1-3, 5 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shigeto et al. (JP 2001-15106) as evidenced by Motoaki et al. (JP 07-183032) in view of Takahashi (USP No. 6,630,065). Applicants respectfully submit that Shigeto and Takahashi, as evidenced by Motoaki, fail to render the pending claims obvious for at least the following reasons.

With regard to the present invention, amended claims 1 and 5 recite, in-part, an alkaline battery comprising: a positive electrode mixture comprising manganese dioxide and nickel oxyhydroxide as active materials, wherein with respect to the total amount of said manganese dioxide and said nickel oxyhydroxide, the content of said manganese dioxide is from 20 to 90 wt% and the content of said nickel oxyhydroxide is from 10 to 80 wt% and an alkaline electrolyte, characterized in that the potential of said manganese dioxide relative to a mercury/mercury oxide electrode in a potassium hydroxide aqueous solution having a KOH concentration of 40 wt% is 272 mV or higher.

It is admitted that Shigeto and Motoaki fail to disclose a battery having a potential of said manganese dioxide relative to a mercury/mercury oxide electrode in a potassium hydroxide aqueous solution having a KOH concentration of 40 wt% that is greater than 272 mV. However, it is alleged that Takahashi discloses a potential of manganese dioxide relative to a mercury/mercury oxide electrode in a potassium hydroxide aqueous solution having a KOH concentration of 40 wt% is 270 mV or higher. In addition, it is also alleged that Takahashi teaches that sulfuric acid concentration is a result effective variable.

Conventional dry-cell batteries use electrolytic manganese dioxide having a potential of approximately 250 mV. This is because it is well known that the use of higher potential manganese dioxide causes the potential difference relative to the negative electrode to become large and the self-discharge rate to increase. As such, storage characteristics of the battery of Takahashi, which discloses an electrolytic manganese dioxide with a potential of 270 mV or more, would be relatively poor, according to conventional thinking. Furthermore, as admitted by the Office Action, increased electrolytic voltage leads to reduced efficiency. Thus, one skilled in the art would not be motivated to combine Takahashi with Shigeto in order to obtain the battery of the present disclosure.

Furthermore, compared to a positive electrode active material having only manganese dioxide, an active material having both manganese dioxide and nickel oxyhydroxide exhibits significantly improved filling property. Thus, a skilled artisan would not deliberately use the high-potential manganese dioxide of Takahashi, which has the risk of deteriorating storage characteristics, in the battery of Shigeto for the purpose of improving filling property. This is because nickel oxyhydroxide has more of an effect on improving filling properties than manganese dioxide. In fact, based upon the cited prior art, using a high-potential manganese

dioxide would have a significant detrimental effect on the storage characteristics of a battery. However, using low-potential manganese dioxide with nickel oxyhydroxide is more of a drawback. For example, as shown in Table 1 of the present disclosure, the battery of Comparative Example 1 which has the lowest manganese dioxide electrode potential, exhibits the worst storage characteristics of all the batteries tested. It was not until the present disclosure that it was shown that use of high-potential manganese dioxide together with nickel oxyhydroxide resulted in favorable storage characteristics. Thus, it has been shown that there is no motivation or suggestion to combine Shigeto with Takahashi. As such, the proposed combination is improper.

Furthermore, as is well known in patent law, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). As the positive electrode active material disclosed in Takahashi would render the battery of Shigeto inoperable for its intended purpose, there is no suggestion or motivation to make the proposed combination of Shigeto with Takahashi. Accordingly, Applicants respectfully submit that the § 103 rejection of claims 1 and 5 over Shigeto and Takahashi.

Moreover, Takahashi discloses a battery that has manganese dioxide, but does not disclose the claimed combination of high-potential electrolytic manganese dioxide with nickel oxyhydroxide. Thus, it would not be readily obvious to combine Takahashi with Shigeto, which teaches the combination of manganese dioxide with nickel oxyhydroxide. Accordingly, is clear that the proposed combination of Takahashi and Shigeto is improper.

III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 5 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

IV. Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

Reg No 53,308

for Michael E. Fogarty
Registration No. 36,139

Please recognize our Customer No. 53080 as our correspondence address.

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 MEF:NDM
Facsimile: 202.756.8087
Date: **September 8, 2008**